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EXAMINER	
CROMPTON, CHRISTOPHER R	
ART UNIT	PAPER NUMBER
2463	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/766,943	GALLANT ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER Ray CROMPTON	2463	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-29,31-39,42-50,54-56 and 58-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-29,31-39,42-50,54-56 and 58-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/04/2011 have been fully considered but they are not persuasive.

2. For claim 1, Applicant argues that ISE et al does not disclose "identifying an available forward bandwidth from the ingress switch to the egress switch" and "identifying an available reverse bandwidth from the egress switch to the ingress switch".

3. ISE discloses notifying of remaining resources along the route from the ingress to the egress node (column 4 lines 61-67). ISE discloses bandwidth can be the remaining resource (column 18 lines 62-67). Therefore ISE discloses identifying an available bandwidth from in between the ingress and the egress switch. Since the broadest reasonable interpretation of the claim language in view of the specification does not limit that the available forward and reverse bandwidths to be two different values, the remaining bandwidth along the route would satisfy both values. Therefore ISE discloses "identifying an available forward bandwidth from the ingress switch to the egress switch" and "identifying an available reverse bandwidth from the egress switch to the ingress switch".

4. Applicant argues that ISE does not disclose “determining an occurrence of at least one of:
a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth, or
a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth.”

5. ISE discloses evaluating to determine whether a requested bandwidth exceeds and available bandwidth (column 4 lines 30-60 and column 18 lines 9-12). Therefore based on the broadest reasonable interpretation consistent with the art and the specification, ISE was disclose determining this for a second occurrence requesting bandwidth when the first occurrence has been accepted would satisfy the claim language, Since ISE would remove the first occurrence's bandwidth requested from the total remaining bandwidth, the second occurrence's requested bandwidth and the first occurrence's requested bandwidth would be checked with the original available bandwidth (B2<= Remaining Bandwidth - B1 which is equal to B1+B2 <= Remaining Bandwidth). Therefore ISE discloses "determining an occurrence of at least one of:
a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth, or
a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth."

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 2, 3, 5, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc (US 6.463.062) in view of Gai (US006167445A) in view of Ise et al (US 6,999,419 B2).

Regarding claim 1, Buyukkoc discloses a method in an synchronous Transfer Mode (ATM) network (see FIG. 7-9, a method performed by central Routing Status Database server, RDS in ATM network; see col. 19, line 55-60) having an ingress switch (see FIG. 9, ATM switch 922) and an egress switch (see FIG. 9, ATM switch 924), wherein the ingress switch serves an ingress device (see FIG. 9, switch 912) operated by a calling party (see FIG. 9, User 902) and the egress switch serves an egress device (see FIG. 9, Switch 914) operated by a called party (see FIG. 9, user 904); see col. 19, line 61 to col. 20, line 24), the method comprising:

receiving, in the ingress switch, a signaling message from the ingress device (see FIG. 9, step 810, edge node receive a new call; see col. 19, line 19-26; also see FIG. 10, step 1005, 1010, 1015, 1020, 1025, 1030; see col. 20, line 50-67);

providing the signaling message to a signaling intercept processor (see FIG. 7, a link 750 to Regional RSD server, RRSD, 740; see col. 13, line 22-46) associated with the ingress switch (see col. 47 to col. 14, line 5; see FIG. 8, step 820; see col. 19, line 25-30; edge node send a call query/message to RSD; also see FIG. 10, step 1035);

propagating the signaling message from the signaling intercept processor to a policy server (see FIG. 7, from regional RSD 740 (RRSD) via a link 770 to central RDS server 730, i.e., Signaling Control Point, SCP),

the policy server being associated with a policy profile database (Tables VII-IX, RSD associated with a database),

the policy profile database storing entries that relate subscriber to policies (see col. 14, line 9 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; RSD stores contents consists call/connection rules/policies (e.g. features/description includes connectively information, threshold, quality of service, capacity, and/or status of loading/congestion), where a call is associated with a user/subscriber since the user/subscriber is the one making the call/connect),

where each policy defines one more policy features of a group of policy features with which the related subscriber is associated (see col. 14, line 35-64; each rule/policy defines/describes the descriptions/features of connectively information, threshold, quality of service, capacity, and/or status of loading/congestion (i.e. a policy/rule for a quality of service feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion; a policy/rule for loading/congestion feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion) associated with a call/connection for the user/subscriber);

Identifying in the policy profile database and based on the signaling message, a policy for the calling party (see col. 17, line 25 to col. 18, line 45; see col. 14, line 9 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; according to a new call, recognizing/identifying a specific rule/policy in the RSD rule/policy database tables VII-IX);

determining, in the policy server and based on the signaling message, that the policy for the calling party is to be enforced (see FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 17, line 25 to col. 18, line 45; see col. 13, line 1-7, 64 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; Tables VII-IX; according to a new call in the RSD database tables, deciding/determining a specific rule/policy to trigger/apply to received call's priority of traffic);

executing, in the policy server and based on the signaling message for each policy feature of the one or more policy features identified by the policy for the calling party (FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 17, line 25 to col. 18, line 45; see col. 13, line 1-7, 64 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; according to a new call, processing/executing in RSD for each status/feature (i.e. connectively information, threshold, quality of service, capacity, or status of loading/congestion) of a group of status/feature/priority (i.e. connectively information, threshold, quality of service, capacity, and status of loading/congestion) identify/recognized by the rule/policy associated with a call/connection for the user/subscriber);

determining whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied with respect to the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber

is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions));

where one ore more policy features, identified by the policy for the calling party, comprises an aggregated bandwidth limit feature (see col. 17, line 30-40; see col. 13, line 45-47; total bandwidth) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises:

calculating bandwidth for the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; Table VII, VIII; determining/calculating threshold capacity/bandwidth/Gbps of the requested new call/connection),

determining whether calculated bandwidth exceeds a requested bandwidth (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining/calculating the determined/calculated threshold capacity/bandwidth/Gbps with threshold capacity/bandwidth/Gbps is higher/exceed the requested/required capacity/bandwidth/Gbps), and

determining that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; ; determining that the condition/status (i.e. red/yellow) for the total bandwidth feature when the determined/calculated threshold capacity/bandwidth/Gbps is not higher/exceed the required/requested capacity/bandwidth/Gbps);

establishing a connection path between the ingress switch and the egress switch based on the determination that the policy condition is satisfied for each policy feature, of the one or more policy features identified by the policy for the calling party (see FIG. 8, step 850, 860, 870; see FIG. 10, steps 1045, 1050, 1055; see col. 14, line 1-65; see col. 19, line 35-50; see col. 21, line 40-50; setting/establishing the call/connection when load/congestion/priority/bandwidth/routes conditions/status (i.e. connectively information, threshold, quality of service, capacity, or status of loading/congestion) are met/fulfilled for each policy/rule status/feature identified/recognized by the user/subscriber policy).

Although Buyukkoc discloses executing in the policy server for each policy feature of the one or more policy features identified by the policy for the calling party as set forth above,

Buyukkoc does not explicitly disclose "appropriate service logic".

However, Gai teaches the policy server (see FIG. 4, policy server 322) being associated with a policy profile database (see FIG. 4, a combined system of database policy rule 414, policy translator, repository 326 and device-specific filtering entity 416), the policy profile database storing entries that relate subscriber to policies (see FIG. 4, stores data related to user policies; see col. 13, line 61 to col. 14, line 5), where each policy defines one more policy features of a

group of policy features with which the related subscriber is associated (see FIG. 4, each policy defines rules/policy features for a group of policy features (e.g. source address screening, Destination address screening features) for each user; see col. 14, line 1-15, 56 to col. 15, line 55);

identifying, in the policy profile database, a policy for the calling party (see FIG. 4, identifying/recognizing the policy for a calling user in the combined database system; see col. 13, line 60 and col. 18, line 65);

Determining, in the policy server and that the policy for the calling party is to enforced (see FIG. 4, determining the policy for the caller/user is to be managed/restricted/enforced in the policy server 322; see col. 13, line 60 and col. 18, line 65);;

executing in the policy server appropriate service logic for each policy feature of the one ore more policy feature identified by the policy of the calling party (see FIG. 4, executing/processing specific engine/logic for each policy feature identified by the policy of caller/user; see col. 13, line 60 and col. 18, line 65);

determining, whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65);

an aggregated bandwidth limit feature (see col. 4, line 50 to col. 5, line 20; combined bandwidth processing) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises :

calculating bandwidth for the signaling message (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; computing/calculating bandwidth for the demand/request message/data)

determining whether calculated bandwidth exceeds a requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether calculated/determined bandwidth exceed the SLA bandwidth), and

determining that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether traffic condition is met/accepted for the combined bandwidth processing when the calculated/determined bandwidth is not exceed the request bandwidth (i.e. bandwith within SLA);

establishing the connection path based on said determination that the policy condition is satisfied for each policy feature, of the one or more policy features identified by the policy for the calling party (see FIG. 4, establishing a connection/communication base on determination that policy/rule status/condition is satisfied/meet for the policy/rule feature identified/recognized by the policy of the caller/user; see col. 13, line 60 and col. 18, line 65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "appropriate service logic", as taught by Gai in the system of Buyukkoc, so that it would ability to allocate network services and resources by applying high-level quality of service policies; see Gai col. 5, line 45-55.

Buyukkoc and Gai do not explicitly disclose

identifying an available forward bandwidth from the ingress switch to the egress switch,

identifying an available reverse bandwidth from the egress switch to the ingress switch,

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress

switch,

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch,

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth,

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth, or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message, and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message, and

forwarding, to the ingress device, a connection failure notice related to the second signaling message.

Ise discloses

identifying an available forward bandwidth from the ingress switch to the egress switch (column 4 lines 61-67 remaining resources on route from ingress to egress node Figure 18 and column 18

lines 62-67 egress edge node transmits the remaining bandwidth),

identifying an available reverse bandwidth from the egress switch to the ingress switch (column 4 lines 61-67 remaining resources on route from ingress to egress node Figure 18 and column 18 lines 62-67 egress edge node transmits the remaining bandwidth),

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed),

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second), or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second) , and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message (column 18 lines 14-21 judge whether to accept the request or not based on whether the resources are available or not), and

forwarding, to the ingress device, a connection failure notice related to the second signaling message (column 18 lines 61-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the previous combination of Buyukkoc and Gai with the aggregate bandwidth limit feature of the forward and reverse direction taught by Ise.

The rationale to combine would be to determine that the whole route would be able to handle the needed bandwidth requirement before accepting the call request.

Regarding claim 2, Buyukkoc discloses where the signaling message comprises a Connect message (see FIG. 8, step 850, a message which contains a route for new call is the connect message in ATM signaling/SS7; see col. 19, line 19-25, 40-45; see col. 20, line 39-45).

Regarding claims 3 and 5, Buyukkoc discloses where the signaling message comprises an Add Party or setup message (see FIG. 8, steps 820,830; a message which contains a new call requesting for a route is the SETUP/adding party message in ATM signaling/SS7; see col. 19, line 19-31; see col. 20, line 46-52; see col. 20, line 39-45; see col. 21, line 19-25).

Regarding claims 12, Buyukkoc discloses wherein where said particular one or more policy features, identified by the policy for the calling party comprises a service class selection feature (see col. 10, line 50-55; see col. 18, line 26-45; class-of-service) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new

call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions), comprises:

determining a requested class of service based on the signaling message (determining/checking a requested/demand class of service based on a new call message; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55),

determining whether the requested class of service is permitted for a customer logical port with which the calling party is associated (determine/checking if a requested/demand class of service based is not-block (i.e. permitted) for a ATM virtual link with VPI port number on a new call; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55); and

determining that the condition is satisfied for the service class selection feature when the requested class of service is permitted for the customer logical port with which the calling party is associated (determining/checking the condition/status (i.e. red/green/yellow) is met/satisfied for class of service when the requested/demand class of service is not-blocked (i.e. permitted) for a VPI port number on a new party; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55).

Gai also discloses a service class selection feature (see col. 3, line 5-60; class/type of service selection/choosing) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises:

determining a requested class of service based on the signaling message (determining/calculating a request type/class of service based on request/demand; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40),

determining whether the requested class of service is permitted for a customer logical port with which the calling party is associated (determining/calculating if the requested/demand class/type of service allowed/permitted for a customer/user logical port/connection (i.e. ATM) with which the caller/subscriber is associated/related; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40); and

determining that the condition is satisfied for the service class selection feature when the requested class of service is permitted for the customer logical port with which the calling party is associated (determining/checking if the condition/status for traffic is permitted/allow for the logic port with which the called/user is related; see col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and further in view of Noake (US006751222B1).

Regarding claim 4, neither Buyukkoc nor Gai explicitly disclose a release message see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65).

However, a release message is well know in the ATM signaling/SS7 in order to disconnect the call.

In particular, Noake teaches a release message (see FIG. 4, RELEASE message; see col. 8, line 9-39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a release message, as taught by Noake in the combined system of Buyukkoc and Gai, so that it would make effective use of a band and the respective apparatus by transmitting connection information, and by sending/receiving a release message it will notify to stop the cell assembling and disassembling processes; see Noake col. 2, line 55-64; col. 8, line 19-24.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and further in view of Farris (US006154445A).

Regarding claim 7, Buyukkoc discloses wherein where said particular one or more policy features, identified by the policy for the calling party comprises a call feature (see col. 10, line 50-55; see col. 18, line 26-45; call/connection type feature) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions), comprises:

determining whether the signaling message result for a customer logical port with which the calling party is associated (determine/checking if a requested/demand class of service based

is not-block (i.e. permitted) for a ATM virtual link with VPI port number on a new call; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55); and

determining that the condition is satisfied for the call feature when the requested the signaling message does not result for the customer logical port with which the calling party is associated (determining/checking the condition/status (i.e. red/green/yellow) is met/satisfied for type of call when the requested/demand call type is not-blocked (i.e. permitted) for a VPI port number on a new party; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55).

Gai also discloses call feature (see col. 3, line 5-60; class/type of service selection/choosing) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises:

determining call type feature based on the signaling message (determining/calculating a request call type based on request/demand; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40),

determining whether the requested call type feature is permitted for a customer logical port with which the calling party is associated (determining/calculating if the requested/demand call type allowed/permitted for a customer/user logical port/connection (i.e. ATM) with which the caller/subscriber is associated/related; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40); and

determining that the condition is satisfied for the call type feature when the requested call type feature does not result for the customer logical port with which the calling party is

associated (determining/checking if the condition/status for traffic is permitted/allow for the logic port with which the called/user is related; see col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40).

Neither Buyukkoc nor Gai explicitly disclose "a maximum call attempt rate limit."

However, having a maximum call attempt rate limit/threshold is well known in the signaling/SS7. In particular, Farris teaches a maximum call attempt rate limit (see col. 14, line 1-12; see col. 11, line 5-17; acceptable/maximum specified rate of call attempts).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "acceptable/maximum specified rate of call attempts", as taught by Farris in the combined system of Buyukkoc and Gai, so that it would can detect the predetermined events and/or imminence of predetermined events, and then blocking or controlling those events from their incipiency; see Farris col. 14, line 1-6.

10. Claims 6, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise, and further in view of Christie'656 (US006690656B1).

Regarding claims 6, 8, and 9, Buyukkoc discloses where said particular one or more policy features, identified by the policy for the calling party, comprises a address validation feature and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively

information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises

determining whether an address associated with the calling party (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining/checking the call/connection of user/subscriber), and

determining that the condition is satisfied for the address validation feature (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining that status/condition (i.e. green, yellow, red) is met/satisfied for the address checking/verification).

Gai discloses disclose a address validation/screening and address screening herein where said particular one or more policy features, identified by the policy for the calling party, comprises address validation feature and where the determining whether a policy condition associated with each policy feature is satisfied comprises: determining whether an address associated with the calling party, and determining that the condition is satisfied for the address validation feature when the address, associated with the calling party (see FIG. 4- 6, and 7A; see col. 9, line 58 to col. 20, line 30).

Neither Buyukkoc nor Gai explicitly disclose "*within a range of authorized addresses", "when the address, associated with the calling party, is determined to be within the range of* authorized addresses".

However, a source address validation/screening is well known in the ATM signaling/SS7.

In particular, Christie'656 teaches a source address validation/screening and a destination address screening herein where said particular one or more policy features, identified by the policy for the calling party, comprises a source address validation feature (see FIG. 7, step 720, 720, 730; policy/rule validation/verification identify the caller is the caller (source) and called (destination) addresses/number/IDs validation; see col. 7, line 5-55; see col. 15, line 30-60) and

determining whether an address associated with the calling party is within a range of authorized addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining whether the caller address with within a range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range), and

determining that the condition is satisfied for the source address validation feature when the address, associated with the calling party, is determined to be within the range of authorized addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining the status/condition is met/accepted/satisfied for the caller ID/number/addresses/ANI associated with the caller is determined to be within range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to "*within a range of authorized addresses", "when the address,* associated with the calling party, is determined to be within the range of authorized addresses"., as taught by Christie'656 in the combined system of Buyukkoc and Gai, so that it would can validate the calls and generate a billing record; see Christie'656 col. 3, line 12-22; col. 7, line 39-45.

11. Claims 14-16, 18, 31, 39, 42, 43, 45 and 58 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and Smith (US006222823B1).

Regarding claim 14, Buyukkoc discloses an Asynchronous Transfer Mode (ATM) network (see FIG. 7-9, ATM network; see col. 19, line 55-60) for effectuating intelligent policy features with respect to a call to be established between a calling party and a called party (see FIG. 9, a connection user 904 and 902; see col. 19, line 61 to col. 20, line 24), comprising:

an ATM switch (see FIG. 9, ATM switch 922) serving a customer premises equipment (CPE) operated by the calling party (see FIG. 9, CPE User 902 connects TDM switch 912; see col. 19, line 64 to col. 20, line 25);

a signaling intercept processor (see FIG. 7, Regional RSD server, RRSD, 740; see col. 13, line 22-46) associated with said ATM switch, the signaling intercept processor to intercept a signaling message relative to said call (see col. 47 to col. 14, line 5; see FIG. 8, step 820; see col. 19, line 25-30; edge node send a call query/message to RSD, thus RSD intercept/capture the call query/message; also see FIG. 10, step 1035);

a policy server (see FIG. 7, central RDS server 730, i.e., Signaling Control Point, SCP) associated with said signaling intercept processor, the policy server being associated with a policy profile database (Tables VII-IX, RSD associated with a database), the policy profile database storing entries that relate subscriber to policies (see col. 14, line 9 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; RSD stores contents consists call/connection rules/policies (e.g. features/description includes connectively information, threshold, quality of service, capacity, and/or status of loading/congestion), where a

call is associated with a user/subscriber since the user/subscriber is the one making the call/connect), where each policy defines one more policy features of a group of policy features with which the related subscriber is associated (see col. 14, line 35-64; each rule/policy defines/describes the descriptions/features of connectively information, threshold, quality of service, capacity, and/or status of loading/congestion (i.e. a policy/rule for a quality of service feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion; a policy/rule for loading/congestion feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion) associated with a call/connection for the user/subscriber) where the policy server is to;

wherein the policy server operates to effectuate a particular policy feature of the plurality of policy feature with respect to said call when triggered by the signaling message received from said signaling intercept processor (see FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; RSD determines/decides whether a particular/specific quality-of-service rule/policy of the load/congestion/priority/bandwidth/route/quality-of-service condition of a new call/connection is met/fulfilled when receiving setup message from a user (via RRSD)).

determining that a policy in the policy profile database is to be enforced for the calling party (see FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 17, line 25 to col. 18, line 45; see col. 13, line 1-7, 64 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; Tables VII-IX; according to a new call in the RSD database tables, deciding/determining a specific rule/policy to trigger/apply to received call's priority of traffic);

execute for each policy feature of the one or more policy features identified by the policy for the calling party (FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 17, line 25 to col. 18, line 45; see col. 13, line 1-7, 64 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; according to a new call, processing/executing in RSD for each status/feature (i.e. connectively information, threshold, quality of service, capacity, or status of loading/congestion) of a group of status/feature/priority (i.e. connectively information, threshold, quality of service, capacity, and status of loading/congestion) identify/recognized by the rule/policy associated with a call/connection for the user/subscriber);

determine whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied with respect to the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions));

a connection path being established when the policy condition for each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied (see FIG. 8, step 850, 860, 870; see FIG. 10, steps 1045, 1050, 1055; see col. 14, line 1-65; see col. 19, line 35-50; see col. 21, line 40-50; setting/establishing the call/connection when load/congestion/priority/bandwidth/routes conditions/status (i.e. connectively information,

threshold, quality of service, capacity, or status of loading/congestion) are met/fulfilled for each policy/rule status/feature identified/recognized by the user/subscriber policy);

one ore more policy features, identified by the policy for the calling party, comprises an aggregated bandwidth limit feature for a particular network port by said calling party (see col. 17, line 30-40; see col. 13, line 45-47; total bandwidth; (see FIG. 9, physical trunk/port 932; see col. 20, line 1-10; col. 17, line 30-40; see col. 13, line 45-47; total bandwidth for the port/link)

Where, when determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) the policy server is to:

calculate bandwidth for the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; Table VII, VIII; determining/calculating threshold capacity/bandwidth/Gbps of the requested new call/connection),

determine whether calculated bandwidth exceeds a requested bandwidth (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining/calculating the determined/calculated

threshold capacity/bandwidth/Gbps with threshold capacity/bandwidth/Gbps is higher/exceed the requested/required capacity/bandwidth/Gbps), and

determine that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; ; determining that the condition/status (i.e. red/yellow) for the total bandwidth feature when the determined/calculated threshold capacity/bandwidth/Gbps is not higher/exceed the required/requested capacity/bandwidth/Gbps).

Although Buyukkoc discloses executing in the policy server for each policy feature of the one or more policy features identified by the policy for the calling party as set forth above,

Buyukkoc does not explicitly disclose "appropriate service logic".

However, Gai teaches the policy server (see FIG. 4, policy server 322) being associated with said intercept processor, the policy server being associated with a policy profile database (see FIG. 4, a combined system of database policy rule 414, policy translator, repository 326 and device-specific filtering entity 416), the policy profile database storing entries that relate subscriber to policies (see FIG. 4, stores data related to user policies; see col. 13, line 61 to col. 14, line 5), where each policy defines one more policy features of a group of policy features with which the related subscriber is associated (see FIG. 4, each policy defines rules/policy features for a group of policy features (e.g. source address screening, Destination address screening features) for each user; see col. 14, line 1-15, 56 to col. 15, line 55) where the policy server is to:

determine that a policy in the policy profile database is to be enforced for the calling party (see FIG. 4, determining a policy for the caller/user in the combined database system is to be managed/restricted/enforced for caller user; see col. 13, line 60 and col. 18, line 65);

execute in the policy server appropriate service logic for each policy feature of the one ore more policy feature identified by the policy of the calling party (see FIG. 4, executing/processing specific engine/logic for each policy feature identified by the policy of caller/user; see col. 13, line 60 and col. 18, line 65);

determining, whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65);

a connection path being established when the policy condition for each policy feature, of the one or more policy features identified by the policy for the calling party is determined to be satisfied (see FIG. 4, establishing a connection/communication base on determination that policy/rule status/condition is satisfied/meet for the policy/rule feature identified/recognized by the policy of the caller/user; see col. 13, line 60 and col. 18, line 65);

an aggregated bandwidth limit feature (see col. 4, line 50 to col. 5, line 20; combined bandwidth processing) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each

policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises :

calculating bandwidth for the signaling message (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; computing/calculating bandwidth for the demand/request message/data)

determining whether calculated bandwidth exceeds a requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether calculated/determined bandwidth exceed the SLA bandwidth), and

determining that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether traffic condition is met/accepted for the combined bandwidth processing when the calculated/determined bandwidth is not exceed the request bandwidth (i.e. bandwith within SLA).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "appropriate service logic", as taught by Gai in the system of Buyukkoc, so that it would ability to allocate network services and resources by applying high-level quality of service policies; see Gai col. 5, line 45-55.

Neither Buyukkoc nor Gai explicitly disclose "*authorized for use*".

However, determining the maximum bandwidth allowable for a particular port authorized for use by said party is well known in the art of ATM. In particular, Smith teaches determining the maximum bandwidth allowable for a particular port authorized for use by said party (see

FIG. 1-2; see col. 9, line 5-45, and abstract; determining predetermined/allowable/authorized bandwidth for a particular port/connection of end station).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determining predetermined/allowable/authorized bandwidth for a particular port/connection of end station, as taught by Smith in the combined system of Buyukkoc and Gai, so that it would cause the system control means to allocate a predetermined bandwidth and balance the bandwidth; see Smith col. 2, line 35-67; col. 9, line 21-25.

Buyukkoc, Gai, and Smith do not explicitly disclose

identifying an available forward bandwidth from the ingress switch to the egress switch,

identifying an available reverse bandwidth from the egress switch to the ingress switch,

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress switch,

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch,

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth,

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth, or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message, and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message, and

forwarding, to the ingress device, a connection failure notice related to the second signaling message.

Ise discloses

identifying an available forward bandwidth from the ingress switch to the egress switch (column 4 lines 61-67 remaining resources on route from ingress to egress node),

identifying an available reverse bandwidth from the egress switch to the ingress switch (Figure 18 and column 18 lines 62-67 egress edge node transmits the remaining bandwidth),

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources),

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second), or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the

second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second) , and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message (column 18 lines 14-21 judge whether to accept the request or not based on whether the resources are available or not), and

forwarding, to the ingress device, a connection failure notice related to the second signaling message (column 18 lines 61-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the previous combination of Buyukkoc and Gai with the aggregate bandwidth limit feature of the forward and reverse direction taught by Ise.

The rationale to combine would be to determine that the whole route would be able to handle the needed bandwidth requirement before accepting the call request.

Regarding claim 39, Buyukkoc discloses a computer-readable medium operable with an Asynchronous Transfer Mode (ATM) network node (see FIG. 9, ATM switch 922,924 with memory 1104; see col. 22, line 12-40), said computer-readable medium carrying a sequence of

instructions provided for executing service logic which, when executed by a processing entity associated with said ATM network node, (see FIG. 11, see col. 22, line 12-40) causes said ATM network node to perform the steps of:

receiving in said ATM network node a signaling message with respect to a call from a calling party (see FIG. 9, User 902; see FIG. 9, step 810, edge node receive a new call; see col. 19, line 19-26; also see FIG. 10, step 1005,1010,1015,1020,1025,1030; see col. 20, line 50-67); and

identifying in the policy profile database associated with the ATM network node and based and based on the signaling message, a policy for the calling party (see col. 17, line 25 to col. 18, line 45; see col. 14, line 9 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; according to a new call, recognizing/identifying a specific rule/policy in the RSD rule/policy database tables VII-IX);

the policy profile database (Tables VII-IX, RSD associated with a database), the policy profile database storing entries that relate subscriber to policies (see col. 14, line 9 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; RSD stores contents consists call/connection rules/policies (e.g. features/description includes connectively information, threshold, quality of service, capacity, and/or status of loading/congestion), where a call is associated with a user/subscriber since the user/subscriber is the one making the call/connect), where each policy defines one more policy features of a group of policy features with which the related subscriber is associated (see col. 14, line 35-64; each rule/policy defines/describes the descriptions/features of connectively information, threshold, quality of service, capacity, and/or status of loading/congestion (i.e. a policy/rule for a quality of service

feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion; a policy/rule for loading/congestion feature/description of a group of features/descriptions connectively information, threshold, quality of service, capacity, and/or status of loading/congestion) associated with a call/connection for the user/subscriber)

executing, based on the signaling message, for each policy feature of the one or more policy features identified by the policy for the calling party (FIG. 8, step 840; see FIG. 10, steps 1035,1040; see col. 17, line 25 to col. 18, line 45; see col. 13, line 1-7, 64 to col. 15, line 50; see col. 10, line 10-20; see col. 11, line 1-16; see col. 13, line 1-6, 29-67; according to a new call, processing/executing in RSD for each status/feature (i.e. connectively information, threshold, quality of service, capacity, or status of loading/congestion) of a group of status/feature/priority (i.e. connectively information, threshold, quality of service, capacity, and status of loading/congestion) identify/recognized by the rule/policy associated with a call/connection for the user/subscriber);

determining whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied with respect to the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber

is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions));

one ore more policy features, identified by the policy for the calling party, comprises an aggregated bandwidth limit feature for a particular network port by said calling party (see col. 17, line 30-40; see col. 13, line 45-47; total bandwidth; (see FIG. 9, physical trunk/port 932; see col. 20, line 1-10; col. 17, line 30-40; see col. 13, line 45-47; total bandwidth for the port/link)

Where, when determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) the policy server is to:

calculate bandwidth for the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; Table VII, VIII; determining/calculating threshold capacity/bandwidth/Gbps of the requested new call/connection),

determine whether calculated bandwidth exceeds a requested bandwidth (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining/calculating the determined/calculated

threshold capacity/bandwidth/Gbps with threshold capacity/bandwidth/Gbps is higher/exceed the requested/required capacity/bandwidth/Gbps), and

determine that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; ; determining that the condition/status (i.e. red/yellow) for the total bandwidth feature when the determined/calculated threshold capacity/bandwidth/Gbps is not higher/exceed the required/requested capacity/bandwidth/Gbps);

upon determining that the policy condition associated with each policy feature of one or more policy feature identified by the policy for the calling party is satisfied with respect to the signaling message (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions)), causing a connection path to be established between the calling party and the call party (see FIG. 8, step 850, 860, 870; see FIG. 10, steps 1045, 1050, 1055; see col. 14, line 1-65; see col. 19, line 35-50; see col. 21, line 40-50; setting/establishing the call/connection when load/congestion/priority/bandwidth/routes conditions/status (i.e. connectively information, threshold, quality of service, capacity, or status

of loading/congestion) are met/fulfilled for each policy/rule status/feature identified/recognized by the user/subscriber policy).

Although Buyukkoc discloses executing in the policy server for each policy feature of the one or more policy features identified by the policy for the calling party as set forth above,

Buyukkoc does not explicitly disclose "appropriate service logic".

However, Gai teaches the policy server (see FIG. 4, policy server 322) being associated with said intercept processor, the policy server being associated with a policy profile database (see FIG. 4, a combined system of database policy rule 414, policy translator, repository 326 and device-specific filtering entity 416), the policy profile database storing entries that relate subscriber to policies (see FIG. 4, stores data related to user policies; see col. 13, line 61 to col. 14, line 5), where each policy defines one more policy features of a group of policy features with which the related subscriber is associated (see FIG. 4, each policy defines rules/policy features for a group of policy features (e.g. source address screening, Destination address screening features) for each user; see col. 14, line 1-15, 56 to col. 15, line 55) where the policy server is to:

determine that a policy in the policy profile database is to be enforced for the calling party (see FIG. 4, determining a policy for the caller/user in the combined database system is to be managed/restricted/enforced for caller user; see col. 13, line 60 and col. 18, line 65);

execute in the policy server appropriate service logic for each policy feature of the one ore more policy feature identified by the policy of the calling party (see FIG. 4, executing/processing specific engine/logic for each policy feature identified by the policy of caller/user; see col. 13, line 60 and col. 18, line 65);

determining, whether a policy condition associated with each policy feature, of the one or more policy features identified by the policy for the calling party, is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65);

an aggregated bandwidth limit feature (see col. 4, line 50 to col. 5, line 20; combined bandwidth processing) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises :

calculating bandwidth for the signaling message (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; computing/calculating bandwidth for the demand/request message/data)

determining whether calculated bandwidth exceeds a requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether calculated/determined bandwidth exceed the SLA bandwidth), and

determining that the condition is satisfied for the aggregate bandwidth limit feature when the calculated bandwidth is determined to not exceed the requested bandwidth (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65; determining/checking whether traffic condition is met/accepted for the combined bandwidth processing when the calculated/determined bandwidth is not exceed the request bandwidth (i.e. bandwith within SLA);

a connection path being established when the policy condition for each policy feature, of the one or more policy features identified by the policy for the calling party is determined to be satisfied (see FIG. 4, establishing a connection/communication base on determination that policy/rule status/condition is satisfied/meet for the policy/rule feature identified/recognized by the policy of the caller/user; see col. 13, line 60 and col. 18, line 65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "appropriate service logic", as taught by Gai in the system of Buyukkoc, so that it would ability to allocate network services and resources by applying high-level quality of service policies; see Gai col. 5, line 45-55.

Neither Buyukkoc nor Gai explicitly disclose "*authorized for use*".

However, determining the maximum bandwidth allowable for a particular port authorized for use by said party is well known in the art of ATM. In particular, Smith teaches determining the maximum bandwidth allowable for a particular port authorized for use by said party (see

FIG. 1-2; see col. 9, line 5-45, and abstract; determining predetermined/allowable/authorized bandwidth for a particular port/connection of end station).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determining predetermined/allowable/authorized bandwidth for a particular port/connection of end station, as taught by Smith in the combined system of Buyukkoc and Gai, so that it would cause the system control means to allocate a predetermined bandwidth and balance the bandwidth; see Smith col. 2, line 35-67; col. 9, line 21-25.

Buyukkoc, Gai, and Smith do not explicitly disclose

identifying an available forward bandwidth from the ingress switch to the egress switch,

identifying an available reverse bandwidth from the egress switch to the ingress switch,

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress switch,

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch,

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth,

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth, or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message, and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message, and

forwarding, to the ingress device, a connection failure notice related to the second signaling message.

Ise discloses

identifying an available forward bandwidth from the ingress switch to the egress switch (column 4 lines 61-67 remaining resources on route from ingress to egress node),

identifying an available reverse bandwidth from the egress switch to the ingress switch (Figure 18 and column 18 lines 62-67 egress edge node transmits the remaining bandwidth),

calculating a first requested bandwidth associated with the first signaling message, where the first requested bandwidth includes a first forward requested bandwidth from the ingress switch to the egress switch and a first reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

calculating a second requested bandwidth associated with the second signaling message, where the second requested bandwidth includes a second forward requested bandwidth from the ingress switch to the egress switch and a second reverse requested bandwidth from the egress switch to the ingress switch (column 4 lines 30-52 shows carrying out admission control for a request for allocation of resources for a flow belonging to a set of flows i.e. multiple signaling messages and the request for resources is the bandwidths),

determining that the available forward bandwidth exceeds the first forward requested bandwidth and that the available reverse bandwidth exceeds the first reverse requested bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources),

determining an occurrence of at least one of:

a total forward requested bandwidth, including the first requested forward bandwidth and the second requested forward bandwidth, exceeds the available forward bandwidth (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second), or

a total reverse requested bandwidth, including the first requested reverse bandwidth and the

second requested reverse bandwidth, exceeds the available reverse bandwidth, determining that the policy condition is satisfied for the aggregate bandwidth limit feature for the first signaling message (column 4 lines 30-52 shows judging whether or not to accept the request according to requested resources and available resources, column 4 lines 53-60 shows checking whether the remaining resources are sufficient i.e. exceed, column 18 lines lines 14-21 shows for the reverse path check the egress node determines if the reservation is smaller than available resources, column 18 lines 9-14 shows the remaining bandwidth would be updated to include the first message when using the second) , and

determining that the policy condition is not satisfied for the aggregate bandwidth limit feature for the second signaling message (column 18 lines 14-21 judge whether to accept the request or not based on whether the resources are available or not), and

forwarding, to the ingress device, a connection failure notice related to the second signaling message (column 18 lines 61-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the previous combination of Buyukkoc and Gai with the aggregate bandwidth limit feature of the forward and reverse direction taught by Ise.

The rationale to combine would be to determine that the whole route would be able to handle the needed bandwidth requirement before accepting the call request.

Regarding claim 15, Buyukkoc discloses where the signaling message comprises a Connect message (see FIG. 8, step 850, a message which contains a route for new call is the connect message in ATM signaling/SS7; see col. 19, line 19-25, 40-45; see col. 20, line 39-45).

Regarding claims 16, 18, 43 and 45, Buyukkoc discloses where the signaling message comprises an Add Party or setup message (see FIG. 8, steps 820,830; a message which contains a new call requesting for a route is the SETUP/adding party message in ATM signaling/SS7; see col. 19, line 19-31; see col. 20, line 46-52; see col. 20, line 39-45; see col. 21, line 19-25).

Regarding claim 31, the combined system of Buyukkoc and Gai discloses all limitation of claim 31 as set forth in claim above. Buyukkoc discloses a service class selection feature for specifying a service class with respect to a network port used by said party (see col. 10, line 50-55; see col. 18, line 26-45; see FIG. 9, trunk/port 932; see col. 20, line 1-10; selecting a class-of-service for a port/link/trunk/circuit used by the call).

Regarding claim 42, Buyukkoc discloses wherein the signaling message comprises a Connect message (see FIG. 8, step 850, a message which contains a route for new call is the connect message in ATM signaling/SS7; see col. 19, line 19-25, 40-45; see col. 20, line 39-45).

Regarding claim 58, the combined system of Buyukkoc and Gai discloses all limitations as set forth in claims above. Buyukkoc further discloses a service class selection feature for specifying a service class with respect to a network port used by said party (see col. 10, line 50-55; see col. 18, line 26-45; see FIG. 9, trunk/port 932; see col. 20, line 1-10; selecting a class-of-service for a port/link/trunk/circuit used by the call).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and VanDervort (US005761191A), or Horn (US005276676A).

Regarding claim 10, Buyukkoc discloses wherein where said particular one or more policy features, identified by the policy for the calling party, comprises a maximum size limit (see col. 14, line 15-65; acceptable/maximum load/size/bandwidth before the call are blocked) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises:

determining whether a size in the signaling message exceeds a limit (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; determining/checking if the acceptable size/load/capacity in the new call exceed threshold) , and

determining that the policy condition is satisfied for the maximum size limit feature when the size does not exceed the limit (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; determining the condition/status (e.g. red, yellow, green) is met/satisfied for the acceptable/maximum load/size/bandwidth when it does not exceed threshold).

Gai also discloses wherein where said particular one or more policy features, identified by the policy for the calling party, comprises a maximum size limit and where the determining

whether a policy condition associated with each policy feature is satisfied comprises: determining whether a burst size in the signaling message exceeds a limit, and determining that the condition is satisfied for the maximum burst size limit feature when the burst size does not exceed the limit (see FIG. 4- 6, and 7A; see col. 9, line 58 to col. 20, line 30).

Neither Buyukkoc nor Gai explicitly disclose "burst".

However, ATM network having a rule/policy/policing attribute burst size threshold/limiting for ATM flow control is well known in the art.

In particular, VanDervort teaches a maximum burst size limit/threshold feature; determining whether a burst size in the signaling message exceeds a limit, and determining that the condition is satisfied for the maximum burst size limit feature when the burst size does not exceed the limit (see col. 6, line 8-11; limited/maximum burst size limit/threshold of user cell transmission for policing).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "burst", as taught by VanDervort in the combined system of Buyukkoc, Ise, and Gai, so that it would control the flow of traffic and maximize the utilization of network resources; see VanDervort col. 6, line 1-3.

In particular, Horn teaches a maximum burst size limit/threshold feature and determining that the condition is satisfied for the maximum burst size limit feature when the burst size does not exceed the limit (see col. 2, line 29-30; maximum burst length is limited by threshold).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "burst", as taught by Horn in the combined system of

Buyukkoc, Ise, and Gai, so that it would avoid overflow problem due to long bursts; see Horn col. 1, line 25-34.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and Basso (US006633539B1).

Regarding claim 13, Buyukkoc discloses one ore more policy features, identified by the policy for the calling party, comprises an maximum call limit feature (see col. 17, line 30-40; see col. 13, line 45-47; see col. 14, line 15-65; acceptable/maximum call load/limit/bandwidth) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises:

determining whether maximum call limit, if a call is established between the calling party and called party, exceeds a requested bandwidth (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining/calculating call load/limit/bandwidth is higher/exceed the requested/required maximum/acceptable load/limit/bandwidth), and

determining that the condition is satisfied for the maximum call limit feature when the call does not exceed maximum call of calls (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining that the condition/status (i.e. red/yellow) for the acceptable/maximum call load/limit/bandwidth when the call is not higher/exceed the accepted/maximum calls).

Gai also discloses maximum call limit feature (see col. 4, line 50 to col. 5, line 20; combined bandwidth processing) and wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises: determining whether maximum call limit, if a call is established between the calling party and called party, exceeds a requested bandwidth determining that the condition is satisfied for the maximum call limit feature when the call does not exceed maximum call of calls (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65).

Neither Buyukkoc nor Gai explicitly disclose “concurrent".

However, ATM network having a maximum concurrent call limit/threshed for call admission control (CAC) is well known in the art. In particular, Basso teaches a maximum concurrent call limit feature (see col. 4, line 25-35; maximum allowed/limit number of concurrent connection/call).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide “concurrent", as taught by Basso in the combined system of

Buyukkoc, Ise, and Gai, so that it would control concurrent connections/calls to provide efficient protection against signaling congestion; see Basso col. 2, line 35-45.

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and Smith further in view of Noake (US006751222B1).

Regarding claim 17, neither Buyukkoc, Gai nor Smith explicitly disclose a release message see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65).

However, a release message is well know in the ATM signaling/SS7 in order to disconnect the call.

In particular, Noake teaches a release message (see FIG. 4, RELEASE message; see col. 8, line 9-39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a release message, as taught by Noake in the combined system of Buyukkoc, Smith, Ise, and Gai, so that it would make effective use of a band and the respective apparatus by transmitting connection information, and by sending/receiving a release message it will notify to stop the cell assembling and disassembling processes; see Noake col. 2, line 55-64; col. 8, line 19-24.

15. Claims 19-21, 23-26, 46-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and Smith, and further in view of Christie'656 (US006690656B1).

Regarding claim 19, the combination of Buyukkoc, Gai, Smith, Ise, and Christie'656 discloses all claimed limitations as set forth in claims above. Buyukkoc discloses accessing said ATM network through a particular network port associated with said CPE (see FIG. 9, accessing Switch 922 through the trunk/port 932; see col. 20, line 1-10). Christie'656 teaches a source address validation for ensuring that said party is an authorized party for accessing the ATM network (see FIG. 7; see col. 7, line 9-19, 35-45; checking/validating caller number in ANI for verification for accessing ATM network).

Regarding claim 20, Buyukkoc discloses wherein said particular network port is a Customer Logical Port (see col. 4, line 20-40; see col. 5, line 20-26; edge node/switch provides logical connection/port (e.g. VPI port) between customer and the network). Christie'656 also discloses a Customer Logical Port (see col. 4, line 35-40; 60-67; a logical/virtual port/link).

Regarding claim 21, Buyukkoc discloses wherein said particular network port is a full physical port (see FIG. 9, physical trunk/port 932; see col. 20, line 1-10).

Regarding claim 23 and 50, Buyukkoc discloses where said particular one or more policy features, identified by the policy for the calling party, comprises a address validation

feature and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises

determining whether an address associated with the calling party (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining/checking the call/connection of user/subscriber), and

determining that the condition is satisfied for the address validation feature (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining that status/condition (i.e. green, yellow, red) is met/satisfied for the address checking/verification).

Gai discloses disclose a address validation/screening and address screening herein where said particular one or more policy features, identified by the policy for the calling party, comprises address validation feature and where the determining whether a policy condition associated with each policy feature is satisfied comprises: determining whether an address associated with the calling party, and determining that the condition is satisfied for the address validation feature when the address, associated with the calling party (see FIG. 4- 6, and 7A; see col. 9, line 58 to col. 20, line 30).

Neither Buyukkoc, Smith nor Gai explicitly disclose "within a range of authorized *addresses", "when the address, associated with the calling party, is determined to be within the* range of authorized addresses", and "a destination address screening for defining a plurality of address to which said party can effectuate said call".

However, a destination address validation/screening is well known in the ATM signaling/SS7, and a destination address/number validation/screening for defining a plurality of address/numbers to which said party can effectuate said call is well known in the signaling with SCP.

In particular, Christie'656 teaches a destination address validation/screening and a destination address screening herein where said particular one or more policy features, identified by the policy for the called party, comprises a destination address validation feature (see FIG. 7, step 720, 720, 730; policy/rule validation/verification identify the called (destination) addresses/number/IDs validation; see col. 7, line 5-55; see col. 15, line 30-60) and

determining whether destination address associated with the called party is within a range of authorized addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining whether the called address with within a range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range), and

determining that the condition is satisfied for the destination address validation feature when the address, associated with the called party, is determined to be within the range of authorized addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining the status/condition is met/accepted/satisfied for the called ID/number/addresses/ANI is determined

to be within range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range);

a destination address screening for defining a plurality of address to which said party can effectuate said call (see FIG. 7; see col. 7, line 9-19, 35-45; see col. 15, line 40-60; see col. 2, line 1-15; verifying a dial number from the list of numbers where the call needs to be connected).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to "within a range of authorized *addresses", "when the address,* associated with the calling party, is determined to be within the range of authorized addresses", and "validate/verify dial number from the list of number to establish the call", as taught by Christie'656 in the combined system of Buyukkoc, Smith, Ise, and Gai, so that it would can validate the calls and generate a billing record; see Christie'656 col. 3, line 12-22; col. 7, line 39-45.

Regarding claim 24, the combined of Buyukkoc, Gai and Christie'656 discloses destination address screening feature is established for a subscriber to which said calling party belongs as set forth above in claim 23.

Neither Buyukkoc nor Christie'656 explicitly discloses "a group of subscribers". However, Gai teaches a policy server (see FIG. 4, policy server 322) comprising the particular policy feature (see FIG. 4, Policy Rule generation engine 414, policy translator 410, and device-specific filtering entity; see col. 13, line 61 to col. 14, line 5) including at least one of a destination screening feature for a group of subscribers to which the party belongs (see col. 14, line 1-15, 56 to col. 15, line 55; applying destination addressing policy rule to a group of users

(see FIG. 7A, marking users, admin users, executive users, etc.) where a specific user (see FIG. 7A, John Doe) belongs; see col. see col. 14, line 10-18).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "a group of subscribers", as taught by Gai in the combined system of Buyukkoc and Christie'565, so that it would ability to allocate network services and resources by applying high-level quality of service policies; see Gai col. 5, line 45-55.

Regarding claims 25, Buyukkoc discloses wherein the ATM network further comprises: the policy server to: identify a policy for the called party, the policy for the called party, the policy of the called party include address screening feature as set forth above in claim 14. Buyukkoc further determine whether a

wherein the determining whether a policy condition associated with each address screening feature is satisfied with respect to signaling message, where, when determining whether the policy condition associated with the source address screening feature is satisfied,(see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with addressing identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection): the policy server is to

determining whether an address associated with the calling party (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining/checking the call/connection of user/subscriber), and

determining that the condition is satisfied for the address validation feature (see col. 3, line 5-65; see col. 7, line 50 to col. 16, line 65; determining that status/condition (i.e. green, yellow, red) is met/satisfied for the address checking/verification);

where the connection path is established based on whether the condition is satisfied for the source address screening feature (see FIG. 8, step 850, 860, 870; see FIG. 10, steps 1045, 1050, 1055; see col. 14, line 1-65; see col. 19, line 35-50; see col. 21, line 40-50; setting/establishing the call/connection when conditions/status address checking/verification is met/fulfilled).

Gai discloses disclose a address validation/screening and address screening herein where said particular one or more policy features, identified by the policy for the calling party, comprises address validation feature and where the determining whether a policy condition associated with each policy feature is satisfied comprises: determining whether an address associated with the calling party, and determining that the condition is satisfied for the address validation feature when the address, associated with the calling party (see FIG. 4- 6, and 7A; see col. 9, line 58 to col. 20, line 30).

Neither Buyukkoc nor Gai explicitly disclose "a second policy server", "within a range *of authorized addresses", "when the address, associated with the c*alling party, is determined to be within the range of authorized addresses".

However, a source address validation/screening is well known in the ATM signaling/SS7.

In particular, Christie'656 teaches a second policy server (see FIG. 10, second call/connection manager (CCM) 1115/1120); see col. 20, line 25 to col. 21, line 60) to: a source address validation/screening and a destination address screening herein where said particular one

or more policy features, identified by the policy for the calling party, comprises a source address validation feature (see FIG. 7, step 720, 720, 730; policy/rule validation/verification identify the caller is the caller (source) and called (destination) addresses/number/IDs validation; see col. 7, line 5-55; see col. 15, line 30-60) and

determining whether an address associated with the calling party is within a range of authorized plurality of addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining whether the caller address with within a range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range), and

determining that the condition is satisfied for the source address validation feature when the address, associated with the calling party, is determined to be within the range of authorized plurality of addresses (see col. 7, line 5-55; see col. 15, line 30-60; determining the status/condition is met/accepted/satisfied for the caller ID/number/addresses/ANI associated with the caller is determined to be within range of authorized numbers/IDs/ANIs; note that a group or IDs/numbers/addresses/ANIs stored in the access table is within an accessible range).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide “a second policy server", “within a range of authorized plurality of *addresses”, “when the address, associated with the calling party, is determined to be* within the range of authorized plurality of addresses", as taught by Christie'656 in the combined system of Buyukkoc and Gai, so that it would can validate the calls and generate a billing record; see Christie'656 col. 3, line 12-22; col. 7, line 39-45.

Regarding claim 26, the combined of Buyukkoc, Gai and Christie'656 discloses source address screening feature is established for a subscriber to which said party belongs as set forth above in claim 25.

Neither Buyukkoc nor Christie'656 explicitly discloses "a group of subscribers". However, Gai teaches a policy server (see FIG. 4, policy server 322) comprising the particular policy feature (see FIG. 4, Policy Rule generation engine 414, policy translator 410, and device-specific filtering entity; see col. 13, line 61 to col. 14, line 5) including at least one of a destination screening feature for a group of subscribers to which the party belongs (see col. 14, line 1-15, 56 to col. 15, line 55; applying destination addressing policy rule to a group of users (see FIG. 7A, marking users, admin users, executive users, etc.) where a specific user (see FIG. 7A, John Doe) belongs; see col. see col. 14, line 10-18).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "a group of subscribers", as taught by Gai in the combined system of Buyukkoc and Christie'565, so that it would ability to allocate network services and resources by applying high-level quality of service policies; see Gai col. 5, line 45-55.

Regarding claim 46, the combined system of Buyukkoc, Gai and Christie'656 discloses all claimed limitations as set forth in claim 19. Buyukkoc discloses accessing said ATM network through a particular network port associated with said CPE (see FIG. 9, accessing Switch 922 through the trunk/port 932; see col. 20, line 1-10).

Regarding claim 47, Buyukkoc discloses wherein said particular network port is a Customer Logical Port (see col. 4, line 20-40; see col. 5, line 20-26; edge node/switch provides logical connection/port between customer and the network). Christie'656 also discloses a Customer Logical Port (see col. 4, line 35-40; 60-67; a logical/virtual port/link).

Regarding claim 48, Buyukkoc discloses wherein said particular network port is a full physical port (see FIG. 9, physical trunk/port 932; see col. 20, line 1-10).

16. Claims 22 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise and Smith and further in view of Farris (US006154445A).

Regarding claim 22, Buyukkoc discloses the number of setup messages (see FIG. 8, steps 820,830; a message which contains a new call requesting for a route is the SETUP/adding party message in ATM signaling/SS7; see col. 19, line 19-31; see col. 20, line 46-52; see col. 20, line 39-45; see col. 21, line 19-25). Buyukkoc discloses the number of setup messages as described above in claim 18.

Buyukkoc discloses wherein where said particular one or more policy features, identified by the policy for the calling party comprises a call feature (see col. 10, line 50-55; see col. 18, line 26-45; call/connection type feature) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30;

determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions), comprises:

determining whether the signaling message result for a customer logical port with which the calling party is associated (determine/checking if a requested/demand class of service based is not-block (i.e. permitted) for a ATM virtual link with VPI port number on a new call; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55); and

determining that the condition is satisfied for the call feature when the requested the signaling message does not result for the customer logical port with which the calling party is associated (determining/checking the condition/status (i.e. red/green/yellow) is met/satisfied for type of call when the requested/demand call type is not-blocked (i.e. permitted) for a VPI port number on a new party; see col. 14, line 1 to col. 18, line 66; see col. 19, line 10-55).

Gai also discloses call feature (see col. 3, line 5-60; class/type of service selection/choosing) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises:

determining call type feature based on the signaling message (determining/calculating a request call type based on request/demand; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40),

determining whether the requested call type feature is permitted for a customer logical port with which the calling party is associated (determining/calculating if the requested/demand call type allowed/permitted for a customer/user logical port/connection (i.e. ATM) with which the caller/subscriber is associated/related; col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40); and

determining that the condition is satisfied for the call type feature when the requested call type feature does not result for the customer logical port with which the calling party is associated (determining/checking if the condition/status for traffic is permitted/allow for the logic port with which the called/user is related; see col. 3, line 5-65; see col. 5, line 5-45; see col. 11, line 1 to col. 12, line 40).

Neither Buyukkoc, Smith nor Gai explicitly disclose "a maximum call attempt rate limit."

However, having a maximum call attempt rate limit/threshold is well known in the signaling/SS7. In particular, Farris teaches a maximum call attempt rate limit (see col. 14, line 1-12; see col. 11, line 5-17; acceptable/maximum specified rate of call attempts).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "acceptable/maximum specified rate of call attempts", as taught by Farris in the combined system of Buyukkoc, Smith, Ise, and Gai, so that it would can detect the predetermined events and/or imminence of predetermined events, and then blocking or controlling those events from their incipiency; see Farris col. 14, line 1-6.

Regarding claim 49, the combined system of Buyukkoc, Gai, Smith and Farris discloses all claimed limitation as set forth in claim 22. Buyukkoc discloses the number of setup messages

(see FIG. 8, steps 820,830; a message which contains a new call requesting for a route is the SETUP/adding party message in ATM signaling/SS7; see col. 19, line 19-31; see col. 20, line 46-52; see col. 20, line 39-45; see col. 21, line 19-25).

17. Claims 38, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai, Ise, Smith, and Basso (US006633539B1).

Regarding claim 38, Buyukkoc discloses a policy feature comprise a maximum call limit feature for specifying the total number of calls allowed concurrently with respect to a network port used by said party (see col. 14, line 10 to col. 15, line 50; see FIG. 9, trunk/port 932; see col. 20, line 1-10; acceptable/allowable total number of calls threshold/limit for a trunk/port). Buyukkoc discloses one ore more policy features, identified by the policy for the calling party, comprises an maximum call limit feature (see col. 17, line 30-40; see col. 13, line 45-47; see col. 14, line 15-65; acceptable/maximum call load/limit/bandwidth) and

wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises:

determining whether maximum call limit, if a call is established between the calling party and called party, exceeds a requested bandwidth (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining/calculating call load/limit/bandwidth is higher/exceed the requested/required maximum/acceptable load/limit/bandwidth), and

determining that the condition is satisfied for the maximum call limit feature when the call does not exceed maximum call of calls (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; Table VII, VIII; determining that the condition/status (i.e. red/yellow) for the acceptable/maximum call load/limit/bandwidth when the call is not higher/exceed the accepted/maximum calls).

Gai also discloses maximum call limit feature (see col. 4, line 50 to col. 5, line 20; combined bandwidth processing) and wherein the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 4, determining if a policy condition/status related/associated with each policy/rule feature identified/recognized by the policy/rule for the caller/user is accepted/satisfied; see col. 13, line 60 and col. 18, line 65) comprises: determining whether maximum call limit, if a call is established between the calling party and called party, exceeds a requested bandwidth determining that the condition is satisfied for the maximum call limit feature when the call does not exceed maximum call of calls (see col. 4, line 50 to col. 5, line 20; see col. 14, line 1-25; see col. 18, line 45-65).

Neither Buyukkoc, Smith nor Gai explicitly disclose “concurrent".

However, ATM network having a maximum concurrent call limit/threshed for call admission control (CAC) is well known in the art. In particular, Basso teaches a maximum

concurrent call limit feature (see col. 4, line 25-35; maximum allowed/limit number of concurrent connection/call).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide “concurrent", as taught by Basso in the combined system of Buyukkoc, Smith, Ise, and Gai, so that it would control concurrent connections/calls to provide efficient protection against signaling congestion; see Basso col. 2, line 35-45.

Regarding claim 65, the combined system of Buyukkoc, Gai and Basso discloses all claimed limitation as set forth in claim 38 above.

18. Claims 27-29 and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc, Gai, Ise, and Smith, in view of Kobayashi (US 5,896,371).

Regarding claims 27, Buyukkoc discloses wherein where said particular one or more policy features, identified by the policy for the calling party, comprises a maximum size limit (see col. 14, line 15-65; acceptable/maximum load/size/bandwidth before the call are blocked) and where the determining whether a policy condition associated with each policy feature is satisfied (see FIG. 8, step 840; see FIG. 10, steps 1035, 1040; see col. 13, line 1-7; 64 to col. 14, line 67; see col. 19, line 25-40; see col. 21, line 19-30; determines/decides whether rule/policy condition/state (e.g. yellow, Red, and green), associated/related with connectively information, threshold, quality of service, capacity, or status of loading/congestion, identified/recognized by the rule/policy associated with a call/connection for the user/subscriber is met/fulfilled according

to a new call/connection (i.e. load/congestion/priority /bandwidth/routes/quality-of-service states/conditions) comprises:

determining whether a size in the signaling message exceeds a limit (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; determining/checking if the acceptable size/load/capacity in the new call exceed threshold) , and

determining that the condition is satisfied for the maximum size limit feature when the size does not exceed the limit (see col. 14, line 10-7 to col. 18, line 45; see col. 19, line 25- to see col. 21, line 30; determining the condition/status (e.g. red, yellow, green) is met/satisfied for the acceptable/maximum load/size/bandwidth when it does not exceed threshold).

Gai also discloses wherein where said particular one or more policy features, identified by the policy for the calling party, comprises a maximum size limit and where the determining whether a policy condition associated with each policy feature is satisfied comprises: determining whether a burst size in the signaling message exceeds a limit, and determining that the condition is satisfied for the maximum burst size limit feature when the burst size does not exceed the limit (see FIG. 4- 6, and 7A; see col. 9, line 58 to col. 20, line 30).

Neither Buyukkoc, Smith nor Gai explicitly disclose "burst-*sized request*".

However, limiting a burst-size request is well known in the art of ATM. In particular, Kobayashi teaches a maximum burst size limit feature for limiting a burst-size request associated with said call (see FIG. 6; see col. 12, line 55 to col. 13, line 35; a limiting/setting/changing the number of cells transmitted in each call).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "burst-*sized request*", as taught by Kobayashi in the

combined system of Buyukkoc, Smith, Ise, and Gai, so that it would provide a flow control performed cooperatively by the network and the terminal equipment and call accepted control is simplified; see Kobayashi col. 7, line 46-52; col. 8, line 40-45.

Regarding claim 28, the combined system of Buyukkoc, Gai, Smith and Kobayashi discloses all claimed limitations. Kobayashi discloses the number of packets per second allowed to be transmitted to said ATM network with respect to said call (see FIG. 6; see col. 12, line 55 to col. 13, line 35; a number of cells per second (i.e. 10Mbps) requested to transmit in each call to ATM network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the number of packets per second requested to be transmitted, as taught by Kobayashi in the combined system of Buyukkoc, Smith and Gai, for the same motivation as above in claim 27.

Regarding claim 29, the combined system of Buyukkoc, Gai , Smith and Kobayashi discloses all claimed limitations. Kobayashi discloses the number of packets per second allowed to be received by said party from said ATM network with respect to said call (see FIG. 6; see col. 12, line 55 to col. 13, line 35; a number of cells per second (i.e. 10Mbps) requested to received in each call from ATM network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the number of packets per second requested to be received, as taught by Kobayashi in the combined system of Buyukkoc, Smith, Gai, for the same motivation as above in claim 27.

Regarding claim 54, the combined system of Buyukkoc, Gai , Smith and Kobayashi discloses all claimed limitations as set forth in claim 27 above.

Regarding claim 55, Kobayashi discloses the number of packets per second allowed to be transmitted to said ATM network with respect to said call (see FIG. 6; see col. 12, line 55 to col. 13, line 35; a number of cells per second (i.e. 10Mbps) requested to transmit in each call to ATM network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the number of packets per second requested to be transmitted, as taught by Kobayashi in the combined system of Buyukkoc, Gai and Smith, for the same motivation as above in claim 27.

Regarding claim 56, Kobayashi discloses the number of packets per second allowed to be received by said party from said ATM network with respect to said call (see FIG. 6; see col. 12, line 55 to col. 13, line 35; a number of cells per second (i.e. 10Mbps) requested to received in each call from ATM network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the number of packets per second requested to be received, as taught by Kobayashi in the combined system of Buyukkoc, Gai and Smith, for the same motivation as above in claim 27.

19. Claims 32-37 and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai, Ise, Smith and Kilkki (US006041039A).

Regarding claims 32-37, the combined system of Buyukkoc, Gai and Smith discloses service class as described above in claim 31 and 58. Buyukkoc further discloses constant bit rate service (CBR) and variable bit rate service (VBR) (see col. 1, line 50-60).

Neither Buyukkoc, Gai nor Smith explicitly discloses, *"real*-time VBR service, non-real time VBR, unspecified bit-rate (UBR), and available bit-*rate (ABR)"*.

However, the ATM class of services a real-time VBR service, non-real time VBR, unspecified bit-rate (UBR), and available bit-rate (ABR) is well known in ATM standard. In particular, Kilkki teaches CBR, VBR, a real-time VBR service, non-real time VBR, unspecified bit-rate (UBR), and available bit-rate (ABR) (see col. 1, line 54-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide quality of service class defined by ATM standard, as taught by Kilkki in the combined system of Buyukkoc, Gai, Ise, and Smith, so that it would provide a capability to manage increases in network load, supporting both real-time and non-real time application, and offering, in certain circumstances, a guaranteed level service quality; see Kilkki col. 1, line 44-53, also by using the ATM standard services, it will enable the service provider to interoperate between multi-vendor networks.

Regarding claims 59-64, the combined system of Buyukkoc, Gai, Ise, and Smith discloses all claimed limitations as set forth in claims 32-37 above.

20. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buyukkoc in view of Gai in view of Ise in view of Smith, and further in view of Noake (US006751222B1).

Regarding claim 44, neither Buyukkoc nor Gai explicitly disclose a release message. However, a release message is well know in the ATM signaling/SS7 in order to disconnect the call. In particular, Noake teaches a release message (see FIG. 4, RELEASE message; see col. 8, line 9-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a release message, as taught by Noake in the combined system of Buyukkoc, Gai, Ise, and Smith so that it would make effective use of a band and the respective apparatus by transmitting connection information, and by sending/receiving a release message it will notify to stop the cell assembling and disassembling processes; see Noake col. 2, line 55-64; col. 8, line 19-24.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER Ray CROMPTON whose telephone number is (571)270-3678. The examiner can normally be reached on Monday-Thursday 2-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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